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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/615,573	07/13/2000	Rajugopal R. Gubbi	003498.P051	4952

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James J. Murphy, Esq  
WINSTEAD, SECHREST & MINICK P.C  
P.O. Box 50784  
1201 Elm Street  
Dallas, TX 75270

EXAMINER

VAUGHN JR, WILLIAM C

ART UNIT

PAPER NUMBER

2143

DATE MAILED: 09/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/615,573	GUBBI, RAJUGOPAL R.
	Examiner	Art Unit
	William C. Vaughn, Jr.	2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

1) Responsive to communication(s) filed on 14 April 2003.

2a) This action is FINAL.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

4) Claim(s) 1-13 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-13 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 13 July 2000 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a)  The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

1. This Action is in response to the papers filed 14 April 2003.

### *Information Disclosure Statement*

2. The references listed in the Information Disclosure Statement submitted on 10 May 2002, have been considered by the examiner (see attached PTO-1449).
3. The application has been examined. **Claims 1-13** are pending. The objection(s) and rejection(s) cited are as stated below:

### *Claim Rejections - 35 USC § 101*

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claims 1-9** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding **claims 1-9**, describes only a protocol and thus fails to recite a hardware executing the protocol. Rendering the claim(s) as reciting only an abstract idea. The claim(s) equate merely to a data structure *per se*, which does not serve a specific function, nor provide functionality to obtain any type of recited utility. Additionally, no storage medium for the data structure has been specified, e.g., embodiment on a computer readable medium. Further, any assumed computer readable medium containing the data structure(s) do not fall within one of the five categories of statutory subject matter, namely, new and useful process, machine,

manufacture, composition of matter, or any new and useful improvement thereof. The claim(s) are directed towards a data structure, which is non-statutory. See MPEP 2106 (IV)(B)(1). Even in cases where nonfunctional descriptive material is recorded on some computer-readable medium, it is not statutory since no requisite functionality is present to satisfy the practical application requirement. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make it statutory. Such a result would exalt form over substance. See *In re Sarkar*, 588 F.2d 1330, 1330, 200 USPQ 132, 137 (CCPA 1978). “Nonfunctional descriptive material” includes but is not limited to music, literary works and a compilation or mere arrangement of data, i.e. a protocol or data structure, such as the one claimed. Where certain types of descriptive material, such as music, literature, art, photographs and mere arrangements or compilations of facts or data, are merely stored so as to be read or outputted by a computer without creating any functional interrelationship, either as part of the stored data or as part of the computing processes performed by the computer, then such descriptive material alone does not impart functionality either to the data as so structured, or to the computer. See MPEP 2106(IV)(B)(1)(b). The invention, as presently claimed, clearly recited a protocol without being executed by hardware, but the invention as claimed, does not do anything, nor does the claimed invention actually impart any specific functionality to any device, including any assumed computerized equipment in the technological art.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 1-4, 6 and 10-13** are rejected under 35 U.S.C. 102(e) as being anticipated by Chuah, U.S. Patent No. 6,567,417.

7. Regarding **claim 1**, Chuah discloses *a networking protocol comprising definitions of quality of service enhancements to provide reliable multimedia data stream connections in a wireless computer network* (Chuah teaches utilizing a protocol such as ATM that provide different QOS within a wireless network in order to further enhance support for multimedia application (*multimedia data stream connections*) network protocol [see Chuah, Col. 1, lines 17-23, Col. 2, lines 49-54, 65-67 and Col. 3, line 1]. By this rationale **claim 1** is rejected.

8. Regarding **claim 2**, Chuah discloses *wherein the quality of service enhancements comprises a multimedia control field* [see Chuah, Figure 6A, item 602, Col. 14, lines 25-46]. By this rationale **claim 2** is rejected.

9. Regarding **claim 3**, Chuah further discloses *wherein the multimedia control field comprises a frame position sub-field* (item 624), [see Chuah, Col. 14, line 60], *a stream index sub-field* (item 636), [see Chuah, Figure 6A], *a basic service set session identification sub-field* (Chuah teaches a control and subtype field that represents a connection ID), [see Chuah, Col. 15, lines 38-54] *and a time stamp sub-field* [see Chuah, Figure 6C, Col. 14, lines 66-67 and Col. 15, lines 1-5]. By this rationale **claim 3** is rejected.

10. Regarding **claim 4**, Chuah further discloses *wherein the quality of service enhancements comprise a capability information field* (Chuah teaches a beacon messages that is use for

capability information), [see Chuah, Figure 6C, Col. 14, lines 65-67 and Col. 15, lines 1-5]. By this rationale **claim 4** is rejected.

11. Regarding **claim 6**, Chuah further discloses *wherein the quality of service enhancements comprises a retransmission mechanism to improve the efficiency of multimedia data stream transmissions* [see Chuah, Col. 14, lines 44-46]. By this rationale **claim 6** is rejected.

12. Regarding **claim 10**, the limitation of this claim is substantially the same as that of claim 1, thus the same rationale for rejecting claim 1 applies as well to claim 10. Furthermore, with regards to the limitation of an interface between a wireless network component and the wireless medium [see Chuah, item 236]. By this rationale **claim 10** is rejected.

13. Regarding **claim 11**, the limitation of this claim is substantially the same as that of claim 1, thus the same rationale for rejecting claim 1 applies equally as well to claim 11. By this rationale **claim 11** is rejected.

14. Regarding **claim 12**, the limitations of this claim is substantially the same as that of claim 1, thus the same rationale for rejecting claim 1 applies equally as well to claim 12. Furthermore with regards to providing instructions that are executed by a machine (Chuah teaches providing an association request (instructions), for requesting association of a wireless modem with an access point), [see Chuah, Col. 19, lines 30-53]. By this rationale **claim 12** is rejected.

15. Regarding **claim 13**, Chuah further discloses *wherein the instructions comprise one or more of the following commands: Null Command, Restart All Stream Connections, Restart All Stream Connections Ack, Stream Connection Request, Stream Connection Accept, Stream Connection Negotiate, Stream Connection Reject, Stream Connection Complete, Stream Disconnect, Stream Disconnect Ack, Stream Authorization Permission Request. Stream*

*Authorization Grant, Stream Authorization Reject, Dynamic Bandwidth Management (DBM), Dynamic Bandwidth Request (DB-Req), Dynamic Bandwidth Request Ack (DB-Req-Ack), Dynamic Bandwidth Grant (DB-Grant), Dynamic Bandwidth Grant Ack (DB-Grant-Ack), Remain Quiet and Remain Quiet Ack, Change Channel and Change Channel Ack, Channel status, PC Redundancy, PCR Negotiation, PCR Pullout, APC Assuming PC Responsibility, PPC Service Request, PPC Provider Request, PPC Service for Subnet Connection, PPC Permission Grant, PPC Permission Ack, PPC Permission Reject, PPC Service Break, PPC Service Break Ack, PPC-OSB Provider Request, PPC-OSB Provider Accept, PPC-OSB Provider Reject, PPC-OSB Provider Ack, PPC-OSB-Tunneling, PPC-OSB Relieve Request, PPC-OSB Relieve Request Ack, Overlapping Subnet Bandwidth Negotiation, Overlapped Subnet Bandwidth Request (OSB-Req), Overlapped Subnet Bandwidth Request Ack (OSB-Req-Ack), Overlapped Subnet Bandwidth Grant (OSB-Grant), Overlapped Subnet Bandwidth Ack (OSB-Ack), Master coordinator Relieve Request, Master coordinator Relieve Request Ack, BSS-SID Allocation, Retransmission Request, Retransmission Fail, Retransmission Fail Ack, Retransmission Resync, and Retransmission Resync Ack (Chuah teaches several request (commands)messages such as connect request, bandwidth request, connection request or connect reply message), [see Chuah, Col. 19, lines 30-53]. By this rationale **claim 13** is rejected.*

***Claim Rejections - 35 USC § 103***

16. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Chuah as applied to claim 1 above, and further in view of Ayanoglu et al. (Ayanoglu), U.S. Patent No. 6,122,759.
17. Regarding **claim 5**, Chuah discloses the invention substantially as claimed. However, Chuah does not explicitly disclose forward error correction based on Reed Solomon coding.

18. In the same field of endeavor, Ayanoglu discloses (e.g., restoration mechanism for use in ATM networks having wireless links). Ayanoglu discloses *wherein the quality of service enhancements comprises a forward error correction based on Reed Solomon coding* [see Ayanoglu, Col. 20, lines 45-49].

19. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated Ayanoglu's teachings of a restoration mechanism for use in ATM networks having wireless links with the teachings of Chuah, for the purpose of providing a reliable data protocol and restoration technique that preserves the overall ATM data structure and minimizes changes in the header would contribute significantly to the practical realization of Wireless ATM [see Ayanoglu, Col. 2, lines 8-12]. Thus, Chuah provides motivation to combine by stating the need to find a protocol that can be utilized within the wireless environment to deal with proper (reliable) delivery of packets as well as dealing with retransmission over wireless links [see Chuah, Col. 3, lines 28-34]. By this rationale **claim 5** is rejected.

*Claim Rejections - 35 USC § 103*

20. **Claims 7-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chuah as applied to claim 1 above, and further in view of Huang et al., (Huang), "MHTP-A Multimedia High Speed Protocol".

21. Regarding **claim 7**, Chuah discloses the invention substantially as claimed. Eventhough, Chuah does disclose an ATM protocol that supports multimedia applications and MAC headers that contain control fields that have type fields and subtype fields [see Chuah, Col. 15, lines 14-

37]. However, Chuah does not explicitly disclose the type field being a multimedia type definition in a medium access control header frame.

22. In the same field of endeavor, Huang discloses (e.g., a multimedia high speed transport protocol). Huang discloses a *multimedia type definition in a medium access control header frame* [see Huang, page 1365, paragraph 2].

23. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated Huang's teachings of a multimedia high speed transport protocol with the teachings of Chuah's, for the purpose of providing a sequence numbering mechanism to identify which packets require reliable transmission and which packets do not require reliable transmission [see Huang, page 1364, Col. 2, paragraph 1]. Thus, Chuah provides motivation by stating that a wireless network that supports multimedia traffic must have an efficient channel access protocol that can maximize the utilization of limited wireless spectrum in order to support quality of service requirements of all traffic [see Chuah, Col. 2, lines 65-67 and Col. 3, line1]. By this rationale **claim 7** is rejected.

24. Regarding **claim 8**, Chuah further discloses *wherein the multimedia type is indicated within a frame control field* [see Chuah, item 602, Col. 14, lines 42]. By this rationale **claim 8** is rejected.

25. Regarding **claim 9**, Chuah further discloses *wherein the multimedia type is indicated by setting to logic high both bites of a two bite sub-field within the frame control field* (It would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have manipulated the control field of a two bite sub-field in making both the bits high). By this rationale **claim 9** is rejected.

*Citation of Pertinent Prior Art*

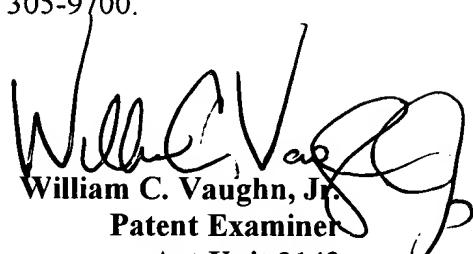
26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Stuart Prevost and Tony Dann, "Ipv6-The Next Generation Internet", discloses an Ipv6 Header, that includes multiple fields such as QOS, version, traffic class [see pages 2 and 3]. Ganz et al. (Ganz), "Converged Voice, Video and Data Wired-Wireless LANs Testbed", discloses solution that provides QOS support for voice, video, and data applications in wired and wireless LANs [see Phonphoem, page 1297 and 1298].

*Conclusion*

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Vaughn, Jr. whose telephone number is (703) 306-9129. The examiner can normally be reached on 8:00-5:00, 1st Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on (703) 308-5221. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9700.

  
William C. Vaughn, Jr.  
Patent Examiner  
Art Unit 2143  
05 September 2003